

REMARKS

Claims 1-4 are canceled without prejudice to reentry and new claims are entered.

The new claims are patentable for the reasons below. Examination of the amended application is respectfully is requested.

The specification was objected to. The specification is corrected as required.

Claim 2 was objected to. This rejection is moot, as claim 2 is canceled.

Claims 1 and 2 were rejected under §102(a) as being anticipated by MacDonald

'332. This rejection is respectfully traversed in regard to new claim 5.

MacDonald teaches (col. 4, lines 57-67) against the accelerometer shown in its “prior art” Fig. 2, with two wafers and a bonded joint (the same type as the Applicants'). The Examiner cites MacDonald at col. 4, line 45+, where over-range stops are mentioned. None is shown in the drawing, and MacDonald does not say where its stops are located; however, the Examiner admits in ¶6 that MacDonald lacks a teaching of stops mounted on

the weight, so the rejection is understood to assert that the stops are below the weight, on the second silicon wafer. This assertion is respectfully traversed, because the stops could bear against the inclined sides of the mass, or against the suspension arms. With respect, the Examiner picks one specific structure out of several possibilities in favor of the rejection.

MacDonald's mounting board (for argument's sake, corresponding to the second silicon wafer in Fig. 2) has a top surface but no stop could be located there, because that surface is entirely covered by the joint with the first (upper) silicon wafer; the weight is above a depression in the top surface. Even if there were some disclosure of a stop facing the bottom of the suspended silicon mass (not admitted), that would not anticipate because such a stop would not be on the "top" surface of the second silicon wafer, as claimed; it would be at the bottom of the depression.

Claim 3 was rejected under §103(a) as obvious over MacDonald in view of Pinter '605 or Fujii '836. This rejection is respectfully traversed in regard to new claim 8.

The Examiner relies on Pinter or Fujii for teaching stops mounted on the weight.

The Examiner cites no specific feature in Pinter, but Pinter discloses stops 6 in Fig. 5 and stops 5 in Fig. 6 (col. 4, lines 7-30). Contrary to the rejection, these stops are fixed to the substrate 4, not to the weight. No combination of Pinter and MacDonald could reach the Applicants' claims, even if obvious (not admitted).

In Fujii, Fig. 9 is applied. In that figure the upper layer corresponds to layer 101 in the lower-numbered drawings, which is an "N-type Si substrate" (col. 5, line 48). The lower layer 114 is also an "Si substrate" (col. 7, line 21). Both layers appear to extend beyond the small portion shown in applied Fig. 9, and to be coextensive. The Applicants question whether Fig. 9 discloses a "sensor *chip* mounted on the top surface of the mounting board," as claimed. (New claim 7 more explicitly recites subject matter related to this.)

The Examiner asserts that reduction of sticking would have motivated combination, but no reasoned argument is presented in support of this and no such teaching is seen in the references themselves. The Applicants believe that the references actually teach against combination, because MacDonald teaches (Abstract, line 1), and also claims (col. 35, line 13), a *capacitive* accelerometer. Capacitance is inversely proportional to the

distance between the two capacitor plates, so the plates need to be close. But if they touch, the capacitor will short out and stop working. Because of this physics, a capacitive accelerometer should not have any structures protruding from the facing surfaces of the capacitor plates; any protruding structure will require the plates to be farther apart, thereby decreasing the capacitance, and will also tend to short out the capacitor when there is only a small displacement.

MacDonald teaches against the type of accelerometer disclosed by Fujii and has no concern with where stops are located in that type (as noted, MacDonald does not describe or illustrate such stops). With respect, no motivation to combine the references is seen.

Claim 4 was rejected under §103(a) as obvious over MacDonald in view of Fujii and/or in further view of Shimada '736. This rejection is respectfully traversed in regard to new claim 9 on grounds of dependence from an allowable claim and on lack of motivation to combine the references.

Based on the above, it is submitted that this application is in condition for allowance and such a Notice, with allowed claims 5-9, earnestly is solicited.

If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone the undersigned counsel to arrange for such a conference. Should any fee be required, please charge the same to our Deposit Account No. 18-0002 and advise us accordingly.

Respectfully submitted,

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Date



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